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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/851,465	05/05/1997	EDGAR C. ROBINSON	INT21246	5986
7590 09/20/2005 JOHN RUSSELL UREN STE 202 1590 BELLEVUE AVE WEST VANCOUVER, V7V1A7 CANADA			EXAMINER COCKS, JOSIAH C	
			ART UNIT 3749	PAPER NUMBER

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/851,465	Applicant(s) ROBINSON ET AL.	
	Examiner Josiah Cocks	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 9/9/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/5/1997 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/9/2005 has been entered.

Drawings

2. It is noted that in notice of the draftsman's drawing review mailed 4/23/2002 new formal drawings were indicated to be required. Therefore, the drawings are not accepted by the examiner. The USPTO no longer provides for drawing corrections to be held in abeyance. Accordingly, new corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of

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the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,428,406 to Nutten et al. ("Nutten") in view of U.S. Patent No. 3,361,183 to Reichhelm ("Reichhelm") and U.S. Patent No. 4,061,463 to Bennett ("Bennett").

Nutten discloses in Figures 1-32 a liquid fuel burner assembly similar to that described in applicant's claims 1-8. In particular, Nutten shows an assembly comprising an air aspirated nozzle (40), a compressor to provide air under positive pressure to the air aspirated nozzle, a zero pressure regulator (60), a fuel supply tank to supply liquid fuel in liquid form and at ambient pressure to the air aspirated nozzle, the fuel entering the nozzle under negative pressure created by air entering the air aspirated nozzle under positive pressure, a manual isolation valve (58), a fuel control valve (110) configured to control liquid fuel supplied to the burner nozzle based on the air flow to the nozzle such that fuel flow is halted in the event of failure of the air flow, and pressure actuated arrangements for controlling flow of liquid fuel to the burner (see col. 9, lines 14-34). Nutten further discloses that air and fuel are mixed within the air aspirated nozzle and

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combusted within a burner that is immediately adjacent to and downstream of the air-aspirated nozzle (40) (see col. 4, lines 28-42).

Nutten possibly does not disclose a manual metering valve interposed between the liquid fuel supply and air aspirated nozzle which is adjustable during operation of the burner assembly or that the burner is an infrared burner.

Reichhelm teaches a liquid fuel burner in the same field of endeavor as Nutten wherein the burner of Reichhelm includes manual air control (34) and liquid fuel control (22) valves, wherein during operation of the burner these valves are arranged to control/meter the fuel flow and the air flow in accordance with desired flame settings (see col. 6, lines 1-4) and to achieve desired characteristics of burner performance (see col. 5, lines 54-57).

In regard to applicant's recitation of an "infrared burner" in the preamble of the claim, this statement is merely one of the intended use of the burner. Applicant's claim does not describe any structure particular to an infrared burner. It has been held that, if the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999); see also MPEP 2111.02. Further, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making,

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the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In this present case, the burner of Nutten would be capable of operating as an infrared burner. Support for this assertion is found in Bennett, which teaches a liquid fuel burner in the same field of endeavor as Nutten. In Bennett, it is explicitly notes that infrared burners are simply a category of burner that includes the use of a burner (such as that of Nutten) in conjunction with a incandescent surface such that flames produced by the burner are not used for direct heating but are projected against the incandescent surface to radiate heat (see col. 1, lines 10-36 and col. 3, lines 15-18). Accordingly, the recitation of “infrared burner” does not patentably applicant’s invention over the Nutten reference.

Therefore, in regard to claims 1-8, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the fuel control valve of Nutten to incorporate the metering/controlling mechanisms of Reichhelm for the desirable purpose of controlling air and fuel ratio such that desired characteristics of burner performance may be achieved (see Reichhelm, col. 5, lines 54-57) and a safety hazard may be prevented from occurring (see Nutten, col. 9, lines 28-34). Further a person of ordinary skill in the art would and modify the burner of Nutten to be an infrared burner as taught in Bennett as infrared burners are preferred when using liquid fuel because of their cleanliness and efficiency and because these burners minimize the possibility of flame quenching (see Bennett, col. 3, lines 18-27).

Response to Arguments

6. Applicant's arguments filed 9/9/005 have been fully considered but they are not persuasive.

Applicant's claims are not limited to a single valve

Applicant acknowledges that applicant's claim do not require that "only" a fuel adjustment valve be present (see page 4 of response). However, applicant goes on to make the following statement:

"The claims require a first valve for adjusting the fuel supply and no other valve is set forth. The Examiner says that a single valve is taught by Reichhelm. This is true. Reichhelm also teaches a second valve for his air supply."

Applicant's claim uses the term "comprising" to bridge the preamble and the body of the claim.

As is well settled, the transitional term "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See MPEP 211.02 (citing *Invitrogen Corp. v. Biocrest Mfg., L.P.* 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003)).

Therefore, as the examiner has noted, that applicant's claim merely recite one valve does not render the scope of the claim limited to a single valve or the exclusion of some other element, for instance, an air metering valve.

Reichhelm teaches the desirability of a fuel metering valve

As the examiner has repeatedly pointed out, Reichhelm clearly discloses an independent manual liquid fuel adjustment valve (22) that is adjustable during operation of the burner. This fuel adjustment valve unambiguously provides that such a valve is desirable in that it allows the fuel flow to be proportioned to produce a desired flame setting (see Reichhelm, col. 6, lines 1-4)

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and achieve desired characteristics of burner performance (see col. 5, lines 54-57). This manual fuel-proportioning valve (22) is identical in both structure and function to the valve recited in applicant's claims. There is no stated requirement in Reichhelm, nor would a person of ordinary skill in the art consider such a requirement to be present, that the fuel-proportioning valve would not function to meter the fuel if not in combination with an air metering valve. That Reichhelm also includes such a separate additional air-control valve (34) does not somehow cause applicant's claimed fuel adjusting valve to read over the fuel-adjusting valve (22) disclosed in Reichhelm. The air control and fuel control valves in Reichhelm are separate structures that function independently.

The examiner notes that the very purpose of applicant's fuel metering valve is to control the amount of fuel that is admitted to the burner assembly (see applicant's specification, page 4) to control burner performance (see applicant's specification, pages 17-18). As one would expect, and as has been identified above, the fuel metering valve of Reichhelm functions for this same purpose.

The valve (22) of Reichhelm is a fuel-metering valve as recited in applicant's claims

Applicant notes that Nutten et al. does not teach a fuel metering valve. The examiner agrees. However, to cure this deficiency in Nutten, the examiner has turned to Reichhelm. As has been thoroughly discussed, Reichhelm teaches a burner in the same field of endeavor as Nutten (and also of applicant's burner) and clearly shows a fuel valve that allows for proportioning or metering of fuel supplied to a burner for the express purpose of achieving

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desired flame settings and burner performance. Accordingly, the combination of Reichhelm with Nutten is considered to be proper and supported by appropriate motivation.

For all of the reasons noted above, the examiner does not consider applicant's claims to read over the prior art of record.

Conclusion

7. This action is made non-final. A THREE (3) MONTH shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on weekdays from 8:00 AM to 5:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter, can be reached at (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Any questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

jcc
September 16, 2005



JOSIAH COCKS
PRIMARY EXAMINER
ART UNIT 3749